

# PASSTCERT

QUESTION & ANSWER

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**Exam** : **DP-300**

**Title** : Administering Relational  
Databases on Microsoft  
Azure

**Version** : DEMO

## 1. Topic 1, Litware

### **Existing Environment**

#### **Network Environment**

The manufacturing and research datacenters connect to the primary datacenter by using a VPN. The primary datacenter has an ExpressRoute connection that uses both Microsoft peering and private peering. The private peering connects to an Azure virtual network named HubVNet.

#### **Identity Environment**

Litware has a hybrid Azure Active Directory (Azure AD) deployment that uses a domain named litwareinc.com. All Azure subscriptions are associated to the litwareinc.com Azure AD tenant.

#### **Database Environment**

The sales department has the following database workload:

- An on-premises named SERVER1 hosts an instance of Microsoft SQL Server 2012 and two 1-TB databases.
- A logical server named SalesSrv01A contains a geo-replicated Azure SQL database named SalesSQLDb1. SalesSQLDb1 is in an elastic pool named SalesSQLDb1Pool. SalesSQLDb1 uses database firewall rules and contained database users.
- An application named SalesSQLDb1App1 uses SalesSQLDb1.

The manufacturing office contains two on-premises SQL Server 2016 servers named SERVER2 and SERVER3. The servers are nodes in the same Always On availability group. The availability group contains a database named ManufacturingSQLDb1

Database administrators have two Azure virtual machines in HubVnet named VM1 and VM2 that run Windows Server 2019 and are used to manage all the Azure databases.

#### **Licensing Agreement**

Litware is a Microsoft Volume Licensing customer that has License Mobility through Software Assurance.

#### **Current Problems**

SalesSQLDb1 experiences performance issues that are likely due to out-of-date statistics and frequent blocking queries.

#### **Requirements**

##### **Planned Changes**

Litware plans to implement the following changes:

- Implement 30 new databases in Azure, which will be used by time-sensitive manufacturing apps that have varying usage patterns. Each database will be approximately 20 GB.
- Create a new Azure SQL database named ResearchDB1 on a logical server named ResearchSrv01. ResearchDB1 will contain Personally Identifiable Information (PII) data.
- Develop an app named ResearchApp1 that will be used by the research department to populate and access ResearchDB1.

- Migrate ManufacturingSQLDb1 to the Azure virtual machine platform.
- Migrate the SERVER1 databases to the Azure SQL Database platform.

### Technical Requirements

Litware identifies the following technical requirements:

- Maintenance tasks must be automated.
- The 30 new databases must scale automatically.
- The use of an on-premises infrastructure must be minimized.
- Azure Hybrid Use Benefits must be leveraged for Azure SQL Database deployments.
- All SQL Server and Azure SQL Database metrics related to CPU and storage usage and limits must be analyzed by using Azure built-in functionality.

### Security and Compliance Requirements

Litware identifies the following security and compliance requirements:

- Store encryption keys in Azure Key Vault.
- Retain backups of the PII data for two months.
- Encrypt the PII data at rest, in transit, and in use.
- Use the principle of least privilege whenever possible.
- Authenticate database users by using Active Directory credentials.
- Protect Azure SQL Database instances by using database-level firewall rules.
- Ensure that all databases hosted in Azure are accessible from VM1 and VM2 without relying on public endpoints.

### Business Requirements

Litware identifies the following business requirements:

- Meet an SLA of 99.99% availability for all Azure deployments.
- Minimize downtime during the migration of the SERVER1 databases.
- Use the Azure Hybrid Use Benefits when migrating workloads to Azure.
- Once all requirements are met, minimize costs whenever possible.

You are evaluating the business goals.

Which feature should you use to provide customers with the required level of access based on their service agreement?

- A. dynamic data masking
- B. Conditional Access in Azure
- C. service principals
- D. row-level security (RLS)

**Answer:** D

**Explanation:**

Reference: <https://docs.microsoft.com/en-us/sql/relational-databases/security/row-level-security?view=sql-server-ver15>

2.You need to recommend a solution to ensure that the customers can create the database objects. The solution must meet the business goals.

What should you include in the recommendation?

- A. For each customer, grant the customer ddl\_admin to the existing schema.
- B. For each customer, create an additional schema and grant the customer ddl\_admin to the new schema.
- C. For each customer, create an additional schema and grant the customer db\_writerto the new schema.
- D. For each customer, grant the customer db\_writerto the existing schema.

**Answer:** D

### 3.DRAG DROP

You create all of the tables and views for ResearchDB1.

You need to implement security for ResearchDB1. The solution must meet the security and compliance requirements.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

#### Actions

#### Answer Area

Run the Always Encrypted wizard.

Create an Azure Key Vault instance and generate a secret.

Create an Azure Key Vault instance and configure an access policy.

Create an Azure AD managed identity.

Register ResearchApp1 to Azure AD.

**Answer:**

### Actions

- Run the Always Encrypted wizard.
- Create an Azure Key Vault instance and generate a secret.
- Create an Azure Key Vault instance and configure an access policy.
- Create an Azure AD managed identity.
- Register ResearchApp1 to Azure AD.

### Answer Area

- Register ResearchApp1 to Azure AD.
- Create an Azure Key Vault instance and configure an access policy.
- Run the Always Encrypted wizard.

#### Explanation:

Graphical user interface, text, application  
Description automatically generated

#### 4.DRAG DROP

You need to configure user authentication for the SERVER1 databases. The solution must meet the security and compliance requirements.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

### Actions

- Create a user in the master database
- Modify the Azure SQL server administrator account
- Create contained database users
- Create an Azure AD administrator for the logical server
- Connect to the databases by using an Azure AD account
- Enable the contained database authentication option

### Answer Area

**Answer:**

**Actions**

Create a user in the master database

Modify the Azure SQL server administrator account

Create contained database users

Create an Azure AD administrator for the logical server

Connect to the databases by using an Azure AD account

Enable the contained database authentication option

**Answer Area**

Create an Azure AD administrator for the logical server

Create contained database users

Connect to the databases by using an Azure AD account

**Explanation:**

Scenario: Authenticate database users by using Active Directory credentials.

The configuration steps include the following procedures to configure and use Azure Active Directory authentication.

- ☞ Create and populate Azure AD.
- ☞ Optional: Associate or change the active directory that is currently associated with your Azure Subscription.
- ☞ Create an Azure Active Directory administrator. (Step 1)
- ☞ Configure your client computers.
- ☞ Create contained database users in your database mapped to Azure AD identities. (Step 2)
- ☞ Connect to your database by using Azure AD identities. (Step 3)

**5.HOTSPOT**

You need to recommend a configuration for ManufacturingSQLDb1 after the migration to Azure. The solution must meet the business requirements.

What should you include in the recommendation? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

## Answer Area

Quorum model:

	▼
Cloud witness	
Disk witness	
File share witness	

Azure resource for the availability group listener:

	▼
Azure Application Gateway	
Azure Basic Load Balancer	

Answer:

## Answer Area

Quorum model:

	▼
Cloud witness	
Disk witness	
File share witness	

Azure resource for the availability group listener:

	▼
Azure Application Gateway	
Azure Basic Load Balancer	

### Explanation:

Scenario: Business Requirements

Litware identifies business requirements include: meet an SLA of 99.99% availability for all Azure deployments.

Box 1: Cloud witness

If you have a Failover Cluster deployment, where all nodes can reach the internet (by extension of Azure), it is recommended that you configure a Cloud Witness as your quorum witness resource.

Box 2: Azure Basic Load Balancer

Microsoft guarantees that a Load Balanced Endpoint using Azure Standard Load Balancer, serving two or more Healthy Virtual Machine Instances, will be available 99.99% of the time.

Note: There are two main options for setting up your listener: external (public) or internal. The external (public) listener uses an internet facing load balancer and is associated with a public Virtual IP (VIP) that is accessible over the internet. An internal listener uses an internal load balancer and only supports clients within the same Virtual Network.